

longnose gar, redbfin pickerel, largemouth bass, striped anchovy, chain pickerel, hogchoker, swamp darter, and Atlantic croaker.

Feeding Success of Young Finfishes. Striped bass larvae exhibited poor feeding success not observed in the other 25 co-habiting species examined. Only one-fourth of larval striped bass contained prey. In contrast, prey was found in stomachs of over 80% of the white perch larvae, the most closely-related species and possessing a similar life history strategy. Striped bass appear to be competing directly with other larval fish species for desirable zooplankton prey, primarily *Bosmina*, rotifers, and copepodite copepods. The most abundant members of the zooplankton community -- adult cladocerans and copepods -- are not being utilized as food to the fullest potential.

Possible Causes of Poor Feeding Success. The low percentage of striped bass with prey in stomachs may be related to fluctuating river flows that transport larvae away from areas of zooplankton abundance, creating a mismatch between striped bass and zooplankton abundances. Preferred food items would be in abundance too low for striped bass larvae to feed effectively. Because of this mismatch, striped bass mortality is abnormally high. This results in poor recruitment, thus contributing to poor year class strength. This mismatch problem is observed in other river systems supporting striped bass and other species; both river flow and water temperature are thought to be major factors controlling the match/mismatch phenomenon. Low zooplankton concentrations observed in the Roanoke system do not mean that successful year classes are not possible, because in years of high larval fish production more young will survive regardless of the food supply in the river. However, larval survival would be enhanced if habitat conditions, such as an adequate food supply, were optimal.